EXHIBIT A

EXHIBIT A – JOINT CLAIM CONSTRUCTION CHART

#	Claim Language	Claim Term(s)	RevelHMI's Proposed Construction	Samsung's Proposed Construction	Court's Construction
1	'081 Patent, Claim 1. **A linear vibration module comprising**: a housing; a moveable component; a power supply; user-input features; a driving component that drives the moveable component in each of two opposite directions within the housing; and a control component that controls supply of power from the power supply to the driving component to cause the moveable component to oscillate at a frequency and an amplitude specified by user input received from the user-input features. '830 Patent, Claim 1. **A vibration module comprising**: a housing; a moveable component; a power supply; user-input features; a driving component that drives the moveable component to oscillate within the housing; and	Preamble ('081 and '830 Patents, claim 1)	[**AGREED**]	[**AGREED**]	The preamble is limiting.

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	a control component that controls supply of power from the power supply to the driving component to cause the moveable component to oscillate at a frequency and an amplitude specified by one or more stored values.				
2	'081 Patent, Claim 2. **The linear vibration module of claim 1 wherein the control component is one of:** **an variable oscillator circuit with additional control circuitry; and** **a control component that includes a microprocessor,** **a control program, stored in an electronic memory within, or separate from, the microprocessor, the control program executed by the microprocessor to control supply of power from the power supply to the driving component to cause the moveable component to oscillate at a frequency and an amplitude specified by user input received from the user-input features**.	"The [linear] vibration module of claim 1 wherein the control component is one of: an variable oscillator circuit with additional control circuitry; and a control component that includes a microprocessor, a control program, stored in an electronic memory within, or separate from, the microprocessor, the control program executed by the microprocessor to control supply of power from the	[**AGREED**]	[**AGREED**]	The limitation may be met either by a "variable oscillator circuit…" or by "a control component that includes a microprocessor…."

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	'830 Patent, Claim 2. **The vibration module of claim 1 wherein the control component is one of: an variable oscillator circuit with additional control circuitry; and a control component that includes a microprocessor, a control program, stored in an electronic memory within, or separate from, the microprocessor, the control program executed by the microprocessor to control supply of power from the power supply to the driving component to cause the moveable component to oscillate at a frequency and an amplitude specified by the one or more stored values**.	power supply to the driving component to cause the moveable component to oscillate at a frequency and an amplitude specified by [user input received from the user-input features/the one or more stored values]" ('081 and '830 Patents, claim 2)			
3	'081 Patent, Claim 1. A linear **vibration module** comprising: a housing; a moveable component; a power supply; user-input features; a driving component that drives the moveable component in each of two opposite directions within the housing; and a control component that controls supply of power from the power	"vibration module" ('081 and '830 Patents, claims 1-8, 17)	Plain and ordinary meaning.	"a vibration-generating device that can be incorporated in a wide variety of appliances, devices, and systems to provide vibrational forces"	

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	supply to the driving component to cause the moveable component to oscillate at a frequency and an amplitude specified by user input received from the user-input features. '081 Patent, Claim 2. The linear **vibration module** of claim 1 wherein the control component is one of: an variable oscillator circuit with additional control circuitry; and a control component that includes a microprocessor, a control program, stored in an electronic memory within, or separate from, the microprocessor, the control program executed by the microprocessor to control supply of power from the power supply to the driving component to cause the moveable component to oscillate at a frequency and an amplitude specified by user input received from the user-input features. '081 Patent, Claim 3. The linear **vibration module** of claim 1 wherein the control component receives output signals from sensors				

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	within the linear **vibration module** during operation of the linear **vibration module** and adjusts one or more operational control outputs of the control component according to the received output signals from the sensors. '081 Patent, Claim 4. The linear **vibration module** of claim 1 wherein the control component adjusts the one or more operational control outputs of the control component according to the received output signals from the sensors in order that subsequent operation of the linear **vibration module** produces desired outputs from the one or more sensors corresponding to one or more operational control parameters. '081 Patent, Claim 5. The linear **vibration module** of claim 4 wherein the one or more operational control parameters is a strength of vibration produced by the linear oscillation of the moveable component; and wherein the one or more operational control outputs is a frequency at				

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	which the control component drives the moveable component to linearly oscillate, the control component dynamically adjusting the power supplied to the driving component to produce linear oscillation of the movable component at a resonant frequency for the linear **vibration module**. '081 Patent, Claim 6. The linear **vibration module** of claim 4 wherein the one or more operational control parameters include both a strength of vibration produced by the linear oscillation of the moveable component and a current operational mode; and wherein the one or more operational control outputs is a control output that determines a current supplied by the power supply to the driving component and a frequency at which the control component drives the moveable component to linearly oscillate. '081 Patent, Claim 7. The linear **vibration module** of claim 1 wherein the driving component comprises one or more				

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	electromagnetic coils that generate magnetic fields parallel to the directions in which the moveable component is driven by the driving component. '081 Patent, Claim 8. The linear **vibration module** of claim 1 wherein the housing is a linear tube, capped at both ends by movable-component-repelling components selected from one of mechanical springs and magnets; wherein the movable component is a magnet shaped to slide within the linear tube; and wherein the driving component is an electromagnetic coil. '081 Patent, Claim 17. The linear **vibration module** of claim 1 wherein the control component controls supply of power from the power supply to the driving component to cause the moveable component to oscillate at a frequency and an amplitude that are independently specified by user input received from the user-input features.				

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	'830 Patent, Claim 1. A **vibration module** comprising: a housing; a moveable component; a power supply; user-input features; a driving component that drives the moveable component to oscillate within the housing; and a control component that controls supply of power from the power supply to the driving component to cause the moveable component to oscillate at a frequency and an amplitude specified by one or more stored values. '830 Patent, Claim 2. The **vibration module** of claim 1 wherein the control component is one of: an variable oscillator circuit with additional control circuitry; and a control component that includes a microprocessor, a control program, stored in an electronic memory within, or separate from, the microprocessor, the control program executed by the microprocessor to control supply of power from the power supply to the driving component to cause the				

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	moveable component to oscillate at a frequency and an amplitude specified by the one or more stored values. '830 Patent, Claim 3. The **vibration module** of claim 1 wherein the control component receives output signals from sensors within the **vibration module** during operation of the **vibration module** and adjusts one or more operational control outputs of the control component according to the received output signals from the sensors. '830 Patent, Claim 4. The **vibration module** of claim 1 wherein the control component adjusts the one or more operational control outputs of the control component according to the received output signals from the sensors in order that subsequent operation of the **vibration module** produces desired outputs from the one or more sensors corresponding to one or more operational control parameters. '830 Patent, Claim 5. The **vibration module** of claim 4 wherein the one				

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	or more operational control parameters is a strength of vibration produced by the oscillation of the moveable component; and wherein the one or more operational control outputs is a frequency at which the control component drives the moveable component to oscillate, the control component dynamically adjusting the power supplied to the driving component to produce oscillation of the movable component at a resonant frequency for the **vibration module**. '830 Patent, Claim 6. The **vibration module** of claim 4 wherein the one or more operational control parameters include both a strength of vibration produced by the oscillation of the moveable component and a current operational mode; and wherein the one or more operational control outputs is a control output that determines a current supplied by the power supply to the driving component and a frequency at which the control component drives the moveable component to oscillate.				

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	'830 Patent, Claim 7. The **vibration module** of claim 1 wherein the driving component comprises one or more electromagnetic coils that generate magnetic fields parallel to the directions in which the moveable component is driven by the driving component. '830 Patent, Claim 8. The **vibration module** of claim 1 wherein the housing is a tube, capped at both ends by movable-component-repelling components selected from one of mechanical springs and magnets; wherein the movable component is a magnet shaped to slide within the tube; and wherein the driving component is an electromagnetic coil. '830 Patent, Claim 17. The **vibration module** of claim 1 wherein the control component controls supply of power from the power supply to the driving component to cause the moveable component to oscillate at a frequency and an amplitude that are independently specified by user				

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	input received from the user-input features.				
4	'081 Patent, Claim 1. A linear vibration module comprising: a housing; a moveable component; a power supply; user-input features; a driving component that drives the moveable component in each of two opposite directions within the housing; and a control component that controls supply of power from the power supply to the driving component to cause the moveable component to oscillate at a **frequency** and an amplitude specified by user input received from the user-input features. '081 Patent, Claim 2. The linear vibration module of claim 1 wherein the control component is one of: an variable oscillator circuit with additional control circuitry; and a control component that includes a microprocessor, a control program, stored in an electronic memory within, or	"frequency" ('081 Patent, claims 1, 2, 5, 6, 17; '830 Patent, claims 1, 2, 5, 6, 17)	Plain and ordinary meaning.	"rate of oscillation"	

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	separate from, the microprocessor, the control program executed by the microprocessor to control supply of power from the power supply to the driving component to cause the moveable component to oscillate at a **frequency** and an amplitude specified by user input received from the user-input features. '081 Patent, Claim 5. The linear vibration module of claim 4 wherein the one or more operational control parameters is a strength of vibration produced by the linear oscillation of the moveable component; and wherein the one or more operational control outputs is a **frequency** at which the control component drives the moveable component to linearly oscillate, the control component dynamically adjusting the power supplied to the driving component to produce linear oscillation of the movable component at a resonant **frequency** for the linear vibration module. '081 Patent, Claim 6. The linear vibration module of claim 4				

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	wherein the one or more operational control parameters include both a strength of vibration produced by the linear oscillation of the moveable component and a current operational mode; and wherein the one or more operational control outputs is a control output that determines a current supplied by the power supply to the driving component and a **frequency** at which the control component drives the moveable component to linearly oscillate. '081 Patent, Claim 17. The linear vibration module of claim 1 wherein the control component controls supply of power from the power supply to the driving component to cause the moveable component to oscillate at a **frequency** and an amplitude that are independently specified by user input received from the user-input features. '830 Patent, Claim 1. A vibration module comprising: a housing; a moveable component; a power supply;				

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	user-input features; a driving component that drives the moveable component to oscillate within the housing; and a control component that controls supply of power from the power supply to the driving component to cause the moveable component to oscillate at a **frequency** and an amplitude specified by one or more stored values. '830 Patent, Claim 2. The vibration module of claim 1 wherein the control component is one of: an variable oscillator circuit with additional control circuitry; and a control component that includes a microprocessor, a control program, stored in an electronic memory within, or separate from, the microprocessor, the control program executed by the microprocessor to control supply of power from the power supply to the driving component to cause the moveable component to oscillate at a **frequency** and an amplitude specified by the one or more stored values.				

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	'830 Patent, Claim 5. The vibration module of claim 4 wherein the one or more operational control parameters is a strength of vibration produced by the oscillation of the moveable component; and wherein the one or more operational control outputs is a **frequency** at which the control component drives the moveable component to oscillate, the control component dynamically adjusting the power supplied to the driving component to produce oscillation of the movable component at a resonant **frequency** for the vibration module. '830 Patent, Claim 6. The vibration module of claim 4 wherein the one or more operational control parameters include both a strength of vibration produced by the oscillation of the moveable component and a current operational mode; and wherein the one or more operational control outputs is a control output that determines a current supplied by the power supply to the driving component and a **frequency** at				

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	which the control component drives the moveable component to oscillate. '830 Patent, Claim 17. The vibration module of claim 1 wherein the control component controls supply of power from the power supply to the driving component to cause the moveable component to oscillate at a **frequency** and an amplitude that are independently specified by user input received from the user-input features.				
5	'081 Patent, Claim 4. The linear vibration module of **claim 1** wherein the control component adjusts the one or more operational control outputs of the control component according to the received output signals from the sensors in order that subsequent operation of the linear vibration module produces desired outputs from the one or more sensors corresponding to one or more operational control parameters. '830 Patent, Claim 4. The vibration module of **claim 1** wherein the control component adjusts the one or more operational control outputs of	"claim 1" ('081 and '830 Patents, claim 4)	"claim 3"; not indefinite.	Plain and ordinary meaning	

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	the control component according to the received output signals from the sensors in order that subsequent operation of the vibration module produces desired outputs from the one or more sensors corresponding to one or more operational control parameters.				
6	'081 Patent, Claim 4. The linear vibration module of claim 1 wherein the control component adjusts **the one or more operational control outputs** of the control component according to the received output signals from the sensors in order that subsequent operation of the linear vibration module produces desired outputs from the one or more sensors corresponding to one or more operational control parameters. '081 Patent, Claim 5. The linear vibration module of claim 4 wherein the one or more operational control parameters is a strength of vibration produced by the linear oscillation of the moveable component; and wherein **the one or more operational control outputs** is a	"the one or more operational control outputs" ('081 and '830 Patents, claims 4, 5, 6)	Plain and ordinary meaning; not indefinite.	Indefinite; no antecedent basis	

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	frequency at which the control component drives the moveable component to linearly oscillate, the control component dynamically adjusting the power supplied to the driving component to produce linear oscillation of the movable component at a resonant frequency for the linear vibration module. '081 Patent, Claim 6. The linear vibration module of claim 4 wherein the one or more operational control parameters include both a strength of vibration produced by the linear oscillation of the moveable component and a current operational mode; and wherein **the one or more operational control outputs** is a control output that determines a current supplied by the power supply to the driving component and a frequency at which the control component drives the moveable component to linearly oscillate. '830 Patent, Claim 4. The vibration module of claim 1 wherein the control component adjusts **the one or more operational control**				

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	outputs of the control component according to the received output signals from the sensors in order that subsequent operation of the vibration module produces desired outputs from the one or more sensors corresponding to one or more operational control parameters. '830 Patent, Claim 5. The vibration module of claim 4 wherein the one or more operational control parameters is a strength of vibration produced by the oscillation of the moveable component; and wherein **the one or more operational control outputs** is a frequency at which the control component drives the moveable component to oscillate, the control component dynamically adjusting the power supplied to the driving component to produce oscillation of the movable component at a resonant frequency for the vibration module. '830 Patent, Claim 6. The vibration module of claim 4 wherein the one or more operational control parameters include both a strength of vibration produced by the				

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	oscillation of the moveable component and a current operational mode; and wherein **the one or more operational control outputs** is a control output that determines a current supplied by the power supply to the driving component and a frequency at which the control component drives the moveable component to oscillate.				
7	'081 Patent, Claim 4. The linear vibration module of claim 1 wherein the control component adjusts the one or more operational control outputs of the control component according to **the received output signals from the sensors** in order that subsequent operation of the linear vibration module produces desired outputs from the one or more sensors corresponding to one or more operational control parameters. '830 Patent, Claim 4. The vibration module of claim 1 wherein the control component adjusts the one or more operational control outputs of the control component according to **the received output signals from**	"the received output signals" / "the received output signals from the sensors" ('081 and '830 Patents, claim 4)	Plain and ordinary meaning; not indefinite.	Indefinite; no antecedent basis	

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	the sensors in order that subsequent operation of the vibration module produces desired outputs from the one or more sensors corresponding to one or more operational control parameters.				
9	'081 Patent, Claim 4. The linear vibration module of claim 1 wherein the control component adjusts the one or more operational control outputs of the control component according to the received output signals from **the sensors** in order that subsequent operation of the linear vibration module produces desired outputs from **the one or more sensors** corresponding to one or more operational control parameters. '830 Patent, Claim 4. The vibration module of claim 1 wherein the control component adjusts the one or more operational control outputs of the control component according to the received output signals from **the sensors** in order that subsequent operation of the vibration module produces desired outputs from **the one or more sensors** corresponding	"the sensors" / "the one or more sensors" ('081 and '830 Patents, claim 4)	Plain and ordinary meaning; not indefinite.	Indefinite; no antecedent basis	

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	to one or more operational control parameters.				
10	'081 Patent, Claim 6. The linear vibration module of claim 4 wherein the one or more operational control parameters include both a strength of vibration produced by the linear oscillation of the moveable component and a current operational mode; and **wherein the one or more operational control outputs is a control output that determines a current supplied by the power supply to the driving component and a frequency at which the control component drives the moveable component to linearly oscillate**. '830 Patent, Claim 6. The vibration module of claim 4 wherein the one or more operational control parameters include both a strength of vibration produced by the oscillation of the moveable component and a current operational mode; and **wherein the one or more operational control outputs is a**	"wherein the one or more operational control outputs is a control output that determines a current supplied by the power supply to the driving component and a frequency at which the control component drives the moveable component to [linearly] oscillate" ('081 and '830 Patents, claim 6)	Plain and ordinary meaning; not indefinite.	"wherein the one or more operational control outputs is a control output that determines a current supplied by the power supply to the driving component and is a frequency at which the control component drives the moveable component to [linearly] oscillate"	

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	control output that determines a current supplied by the power supply to the driving component and a frequency at which the control component drives the moveable component to oscillate.				
11	'081 Patent, Claim 8. The linear vibration module of claim 1 wherein the housing is a linear **tube**, capped at both ends by movable-component-repelling components selected from one of mechanical springs and magnets; wherein the movable component is a magnet shaped to slide within the linear **tube**; and wherein the driving component is an electromagnetic coil. '830 Patent, Claim 8. The vibration module of claim 1 wherein the housing is a **tube**, capped at both ends by movable-component-repelling components selected from one of mechanical springs and magnets; wherein the movable component is a magnet shaped to slide within the **tube**; and	"tube" ('081 and '830 Patents, claim 8)	Plain and ordinary meaning.	"cylindrical housing"	

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	wherein the driving component is an electromagnetic coil.				
12	'081 Patent, Claim 1. A linear vibration module comprising: a housing; a **moveable component**; a power supply; user-input features; a driving component that drives the **moveable component** in each of two opposite directions within the housing; and a control component that controls supply of power from the power supply to the driving component to cause the **moveable component** to oscillate at a frequency and an amplitude specified by user input received from the user-input features. '081 Patent, Claim 2. The linear vibration module of claim 1 wherein the control component is one of: an variable oscillator circuit with additional control circuitry; and a control component that includes a microprocessor, a control program, stored in an electronic memory within, or	"moveable component" ('081 and '830 Patents, claims 1, 2, 5-7, 17)	Plain and ordinary meaning; not subject to 35 U.S.C. § 112 ¶ 6. If subject to 35 U.S.C. § 112 ¶ 6, then: **Function**: moving **Structures**: A moving weight. E.g., '081 and '830 Patents, Figs. 4A-4G (weight 404), Fig. 6 (oscillating mass 634), Fig. 11 (moving mass 1102), Fig. 12 (moving mass with additional coils 1202 and 1204), Fig. 13 (moving mass/weight 1306), Fig. 14 (driving magnet 1406), Figs. 15, 16 (magnets 1506, 1508); and equivalents thereof	Subject to 35 U.S.C. § 112 ¶ 6. **Function**: Moving. **Structures**: A moving weight. E.g., '081 and '830 Patents, Figs. 4A-4G (weight 404), Fig. 6 (oscillating mass 634), Fig. 11 (moving mass 1102), Fig. 12 (moving mass with additional coils 1202 and 1204), Fig. 13 (moving mass/weight 1306), Fig. 14 (driving magnet 1406), Figs. 15, 16 (magnets 1506, 1508)	

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	separate from, the microprocessor, the control program executed by the microprocessor to control supply of power from the power supply to the driving component to cause the **moveable component** to oscillate at a frequency and an amplitude specified by user input received from the user-input features. '081 Patent, Claim 5. The linear vibration module of claim 4 wherein the one or more operational control parameters is a strength of vibration produced by the linear oscillation of the **moveable component**; and wherein the one or more operational control outputs is a frequency at which the control component drives the **moveable component** to linearly oscillate, the control component dynamically adjusting the power supplied to the driving component to produce linear oscillation of the movable component at a resonant frequency for the linear vibration module. '081 Patent, Claim 6. The linear vibration module of claim 4				

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	wherein the one or more operational control parameters include both a strength of vibration produced by the linear oscillation of the **moveable component** and a current operational mode; and wherein the one or more operational control outputs is a control output that determines a current supplied by the power supply to the driving component and a frequency at which the control component drives the **moveable component** to linearly oscillate. '081 Patent, Claim 7. The linear vibration module of claim 1 wherein the driving component comprises one or more electromagnetic coils that generate magnetic fields parallel to the directions in which the **moveable component** is driven by the driving component. '081 Patent, Claim 17. The linear vibration module of claim 1 wherein the control component controls supply of power from the power supply to the driving component to cause the **moveable component** to oscillate at a frequency and an				

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	amplitude that are independently specified by user input received from the user-input features. '830 Patent, Claim 1. A vibration module comprising: a housing; a **moveable component**; a power supply; user-input features; a driving component that drives the **moveable component** to oscillate within the housing; and a control component that controls supply of power from the power supply to the driving component to cause the **moveable component** to oscillate at a frequency and an amplitude specified by one or more stored values. '830 Patent, Claim 2. The vibration module of claim 1 wherein the control component is one of: an variable oscillator circuit with additional control circuitry; and a control component that includes a microprocessor, a control program, stored in an electronic memory within, or separate from, the microprocessor,				

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	the control program executed by the microprocessor to control supply of power from the power supply to the driving component to cause the **moveable component** to oscillate at a frequency and an amplitude specified by the one or more stored values. '830 Patent, Claim 5. The vibration module of claim 4 wherein the one or more operational control parameters is a strength of vibration produced by the oscillation of the **moveable component**; and wherein the one or more operational control outputs is a frequency at which the control component drives the **moveable component** to oscillate, the control component dynamically adjusting the power supplied to the driving component to produce oscillation of the movable component at a resonant frequency for the vibration module. '830 Patent, Claim 6. The vibration module of claim 4 wherein the one or more operational control parameters include both a strength of vibration produced by the				

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	oscillation of the **moveable component** and a current operational mode; and wherein the one or more operational control outputs is a control output that determines a current supplied by the power supply to the driving component and a frequency at which the control component drives the **moveable component** to oscillate. '830 Patent, Claim 7. The vibration module of claim 1 wherein the driving component comprises one or more electromagnetic coils that generate magnetic fields parallel to the directions in which the **moveable component** is driven by the driving component. '830 Patent, Claim 17. The vibration module of claim 1 wherein the control component controls supply of power from the power supply to the driving component to cause the **moveable component** to oscillate at a frequency and an amplitude that are independently specified by user input received from the user-input features.				

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13	'081 Patent, Claim 1. A linear vibration module comprising: a housing; a moveable component; a power supply; user-input features; a **driving component that drives the moveable component in each of two opposite directions within the housing**; and a control component that controls supply of power from the power supply to the driving component to cause the moveable component to oscillate at a frequency and an amplitude specified by user input received from the user-input features. '830 Patent, Claim 1. A vibration module comprising: a housing; a moveable component; a power supply; user-input features; a **driving component that drives the moveable component to oscillate within the housing**; and a control component that controls supply of power from the power supply to the driving component to	"driving component that drives the moveable component [in each of two opposite directions/to oscillate] within the housing" ('081 and '830 Patents, claim 1)	Subject to 35 U.S.C. § 112 ¶ 6. **Function:** driving the moveable component [in each of two opposite directions/to oscillate] within the housing **Structures**: One or more coils or electromagnets. E.g., '081 and '830 Patents, Figs 4A-4G (coil 420); Fig. 5A (coil 514), Fig. 6 (coil 626), electromagnet of Fig. 10, electromagnet of Fig. 11, Fig. 12 (coil 1206), Fig. 13 (first coil 1302 and second coil 1304), Fig. 14 (coils 1412 and 1414), Figs. 15, 16 (coil 1510), stator coils of Figures 24A, 24B, and 25; and equivalents thereof	Subject to 35 U.S.C. § 112 ¶ 6. **Function**: driving the moveable component [in each of two opposite directions/to oscillate] within the housing **Structures**: One or more electromagnetic coils. E.g., '081 and '830 Patents, Figs. 4A-4G (coil 420), Fig. 5A (coil 514), Fig. 6 (coil 626), electromagnet of Fig. 10, electromagnet of Fig. 11, Fig. 12 (coil 1206), Fig. 13 (first coil 1302 and second coil 1304), Fig. 14 (coils 1412 and 1414), Figs. 15, 16 (coil 1510), stator coils of Figures 24A, 24B, and 25	

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	cause the moveable component to oscillate at a frequency and an amplitude specified by one or more stored values.				
14	'081 Patent, Claim 1. A linear vibration module comprising: a housing; a moveable component; a power supply; user-input features; a driving component that drives the moveable component in each of two opposite directions within the housing; and a **control component that controls supply of power from the power supply to the driving component to cause the moveable component to oscillate at a frequency and an amplitude specified by user input received from the user-input features**. '830 Patent, Claim 1. A vibration module comprising: a housing; a moveable component; a power supply; user-input features;	"control component that controls supply of power from the power supply to the driving component to cause the moveable component to oscillate at a frequency and an amplitude specified by [user input received from the user-input features / one or more stored values]" ('081 and '830 Patents, claim 1)	Subject to 35 U.S.C. § 112 ¶ 6. **Function**: controlling supply of power from the power supply to the driving component to cause the moveable component to oscillate at a frequency and an amplitude specified by [user input received from the user-input features / one or more stored values] **Structures**: oscillator circuit; microcontroller with internal or external memory; processor; CPU; microprocessor; and equivalents thereof [if an algorithm is required] Where the corresponding structure is a processor, CPU, or microprocessor, the processor/CPU/microprocessor is programmed with an	Subject to 35 U.S.C. 112 ¶ 6. **Function**: controlling supply of power from the power supply to the driving component to cause the moveable component to oscillate at a frequency and an amplitude specified by [user input received from the user-input features / one or more stored values] **Structures**: Processor programmed with an algorithm to perform the following steps: (1) set the mode and strength to [default values or] values represented by selections made by	

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	a driving component that drives the moveable component to oscillate within the housing; and a **control component that controls supply of power from the power supply to the driving component to cause the moveable component to oscillate at a frequency and an amplitude specified by one or more stored values**.		algorithm comprising the following steps: (a) set the mode and strength to [default values or] values representing selections made by user input to the user input features; and (b) provide a corresponding output to the power supply so that the power supply provides a corresponding output to the driving component *See, e.g.*, '081 Patent at 7:10-24, 8:10-20, Figs. 7A, 7C; '830 Patent at 7:20-34, 8:20-30, Figs. 7A, 7C **In the alternative**, if the Court finds that a three-step algorithm is necessary, then RevelHMI proposes that the following three-step algorithm (which Samsung proposed in its IPR petitions) be adopted by the Court: (1) set the mode and strength to [default values or] values represented by selections made by user input to the user input features, (2) provide a corresponding output to the power supply, and (3)	user input to the user input features, (2) provide a corresponding output to the power supply, and (3) provide a corresponding output to the driving component. '081 Patent at 6:32-35, 7:10-24, 8:10-20, Figs. 7A, 7C; '830 Patent at 6:40-44, 7:20-34, 8:20-30, Figs. 7A, 7C.	

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			provide a corresponding output to an H-bridge switch.		
15	'081 Patent, Claim 3. The linear vibration module of claim 1 **wherein the control component receives output signals from sensors within the linear vibration module during operation of the linear vibration module and adjusts one or more operational control outputs of the control component according to the received output signals from the sensors.** '830 Patent, Claim 3. The vibration module of claim 1 **wherein the control component receives output signals from sensors within the vibration module during operation of the vibration module and adjusts one or more operational control outputs of the control component according to the received output signals from the sensors.**	"wherein the control component receives output signals from sensors within the [linear] vibration module during operation of the [linear] vibration module and adjusts one or more operational control outputs of the control component according to the received output signals from the sensors" ('081 and '830 Patents, claim 3)	Subject to 35 U.S.C. § 112 ¶ 6. **Function**: receiving output signals from sensors within the [linear] vibration module during operation of the [linear] vibration module and adjust one or more operational control outputs of the control component according to the received output signals from the sensors **Structures**: oscillator circuit; microcontroller with internal or external memory; processor; CPU; microprocessor; and equivalents thereof [if an algorithm is required] Where the corresponding structure is a processor, CPU, or microprocessor, the processor/CPU/microprocessor is programmed with an algorithm comprising the following steps: (a) receive the value of an output signal;	Subject to 35 U.S.C. § 112 ¶ 6. **Function**: receiving output signals from sensors within the [linear] vibration module during operation of the [linear] vibration module and adjusting one or more operational control outputs of the control component according to the received output signals from the sensors **Structures**: Claim 1 structure with the processor further programmed with an algorithm to perform the following steps: (1) convert the received output signal into an integer, (2) compare	

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			(b) compare that value to a different value, which could be a previous value; and (c) adjust one or more operational control outputs based on that comparison *See, e.g.*, '081 Patent at 7:13-18, 7:32-8:9, Figs. 7A, 7B; '830 Patent at 7:23-28, 7:42-8:19, Figs. 7A, 7B	that integer to a specific value, (3) adjust one or more operational control outputs based on that comparison. '081 Patent at 7:13-18, 7:32-8:9, Figs. 7A, 7B; '830 Patent at 7:23-29, 7:42-8:19, Figs. 7A, 7B.	
16	'081 Patent, Claim 4. The linear vibration module of claim 1 **wherein the control component adjusts the one or more operational control outputs of the control component according to the received output signals from the sensors in order that subsequent operation of the linear vibration module produces desired outputs from the one or more sensors corresponding to one or more operational control parameters**. '830 Patent, Claim 4. The vibration module of claim 1 **wherein the control component adjusts the one or more operational control outputs of the control component**	"wherein the control component adjusts the one or more operational control outputs of the control component according to the received output signals from the sensors in order that subsequent operation of the [linear] vibration module produces desired outputs from the one or more sensors corresponding to	Subject to 35 U.S.C. § 112 ¶ 6. **Function:** adjusting the one or more operational control outputs of the control component according to the received output signals from the sensors in order that subsequent operation of the [linear] vibration module produces desired outputs from the one or more sensors corresponding to one or more operational control parameters **Structures**: Same structure as described above with respect to claim 3.	Subject to 35 U.S.C. § 112 ¶ 6. **Function**: adjusting the one or more operational control outputs of the control component according to the received output signals from the sensors in order that subsequent operation of the [linear] vibration module produces desired outputs from the one or more sensors corresponding to one or more	

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	according to the received output signals from the sensors in order that subsequent operation of the vibration module produces desired outputs from the one or more sensors corresponding to one or more operational control parameters.	one or more operational control parameters" ('081 and '830 Patents, claim 4)		operational control parameters **Structures**: Claim 1 structure with the processor further programmed with the same claim 3 algorithm.	
17	'081 Patent, Claim 5. The linear vibration module of claim 4 **wherein the one or more operational control parameters is a strength of vibration produced by the linear oscillation of the moveable component; and wherein the one or more operational control outputs is a frequency at which the control component drives the moveable component to linearly oscillate, the control component dynamically adjusting the power supplied to the driving component to produce linear oscillation of the movable component at a resonant frequency for the linear vibration module**.	"wherein the one or more operational control parameters is a strength of vibration produced by the [linear] oscillation of the moveable component; and wherein the one or more operational control outputs is a frequency at which the control component drives the moveable component to [linearly] oscillate, the control component dynamically	Subject to 35 U.S.C. § 112 ¶ 6. **Function**: dynamically adjusting the power supplied to the driving component to produce [linear] oscillation of the movable component at a resonant frequency for the [linear] vibration module **Structures**: oscillator circuit; microcontroller with internal or external memory; processor; CPU; microprocessor; and equivalents thereof [if an algorithm is required] Where the corresponding structure is a processor, CPU, or microprocessor, the processor/CPU/microprocessor	Subject to 35 U.S.C. § 112 ¶ 6. **Function**: Claim 4 function wherein the one or more operational control parameters is a strength of vibration produced by the [linear] oscillation of the moveable component; and wherein the one or more operational control outputs is a frequency at which the control component drives the moveable component to [linearly] oscillate, the	

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	'830 Patent, Claim 5. The vibration module of claim 4 **wherein the one or more operational control parameters is a strength of vibration produced by the oscillation of the moveable component; and wherein the one or more operational control outputs is a frequency at which the control component drives the moveable component to oscillate, the control component dynamically adjusting the power supplied to the driving component to produce oscillation of the movable component at a resonant frequency for the vibration module**.	adjusting the power supplied to the driving component to produce [linear] oscillation of the movable component at a resonant frequency for the linear vibration module" ('081 and '830 Patents, claim 5)	is programmed with an algorithm comprising the following steps: (a) if the frequency at which the device operates has been increasing and the vibrational force is greater than the previously sensed vibrational force, then increase the frequency—otherwise decrease the frequency; and (b) if the frequency at which the device operates has not been increasing and the vibrational force is greater than the previously sensed vibrational force, then decrease the frequency—otherwise increase the frequency *See, e.g.*, '081 Patent at 7:38-42, 7:50-8:9, Fig. 7B; '830 Patent at 7:48-52, 7:60-8:19, Fig. 7B	control component dynamically adjusting the power supplied to the driving component to produce [linear] oscillation of the movable component at a resonant frequency for the [linear] vibration module. **Structures**: Claim 1 structure with the processor further programmed according to the "default" algorithm illustrated in Figure 7B which comprises the following steps: (1) storing sensor input representing the current vibrational force in a variable; (2) checking a previously set variable to determine if the rate of oscillation of the movable component is increasing; (3) if the rate of oscillation of	

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				the movable component is increasing and the vibrational force is greater than the previously measured vibrational force, increasing the rate of oscillation of the movable component, otherwise decreasing the rate of oscillation of the movable component; and (4) if the rate of oscillation of the movable component is not increasing and the vibrational force is greater than the previously measured vibrational force, decreasing the rate of oscillation of the movable component, otherwise increasing the rate of oscillation of the movable component. '081 Patent at 7:38-42, 7:50-8:9, Fig. 7B; '830	

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				Patent at 7:48-52, 7:60-8:19, Fig. 7B.	
18	'081 Patent, Claim 6. The linear vibration module of claim 4 **wherein the one or more operational control parameters include both a strength of vibration produced by the linear oscillation of the moveable component and a current operational mode; and wherein the one or more operational control outputs is a control output that determines a current supplied by the power supply to the driving component and a frequency at which the control component drives the moveable component to linearly oscillate**. '830 Patent, Claim 6. The vibration module of claim 4 **wherein the one or more operational control parameters include both a strength of vibration produced by the oscillation of the moveable component and a current operational mode; and**	"wherein the one or more operational control parameters include both a strength of vibration produced by the [linear] oscillation of the moveable component and a current operational mode; and wherein the one or more operational control outputs is a control output that determines a current supplied by the power supply to the driving component and a frequency at which the control component drives the moveable component to [linearly] oscillate"	Plain and ordinary meaning; not subject to 35 U.S.C. § 112 ¶ 6; not indefinite. If subject to 35 U.S.C. § 112 ¶ 6 and Samsung's function is accepted, then: **Structures**: oscillator circuit; microcontroller with internal or external memory; processor; CPU; microprocessor; and equivalents thereof [if an algorithm is required] Where the corresponding structure is a processor, CPU, or microprocessor, the processor/CPU/microprocessor is programmed with an algorithm comprising the following steps: (a) set the mode and strength to [default values or] values representing selections made by user input to the user input features; and (b) provide a corresponding output to the power supply so	Subject to 35 U.S.C. § 112 ¶ 6. **Function**: Claim 4 function wherein the one or more operational control parameters include both a strength of vibration produced by the [linear] oscillation of the moveable component and a current operational mode; and wherein the one or more operational control outputs is a control output that determines a current supplied by the power supply to the driving component and a frequency at which the control component drives the moveable component to [linearly] oscillate.	

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	wherein the one or more operational control outputs is a control output that determines a current supplied by the power supply to the driving component and a frequency at which the control component drives the moveable component to oscillate.	('081 and '830 Patents, claim 6)	that the power supply provides a corresponding current to the driving component *See, e.g.*, '081 Patent at 7:10-24, 8:10-20, Figs. 7A, 7C; '830 Patent at 7:20-34, 8:20-30, Figs. 7A, 7C	**Structures**: Indefinite	